

The opinion in support of the decision being entered today was not written for publication and is not binding precedent of the Board.

Paper No. 18

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES

Ex parte STEPHEN JOHN MCCULLOUGH,
PETER JOHN ALLEN and SHERRI LYNN DREW

Appeal No. 2000-1516
Application 08/897,337

ON BRIEF

Before KIMLIN, PAK and OWENS, *Administrative Patent Judges*.
OWENS, *Administrative Patent Judge*.

DECISION ON APPEAL

This appeal is from the final rejection of claims 1-8, which are all of the claims in the application.

THE INVENTION

The claimed invention is directed toward a method for making a creped tissue. Claim 1 is illustrative:

1. A method for making creped tissue comprising: (a) forming a wet tissue web by depositing an aqueous papermaking furnish onto a forming fabric; (b) partially dewatering the tissue web; (c) applying a creping adhesive and about 0.05 weight percent or greater, based on the weight of dry fiber in the tissue web, of one or more softening agents to the surface of a Yankee dryer; (d) adhering the tissue web to the surface of the Yankee dryer such that the softening agent is transferred to the tissue web; and (e) creping the web.

THE REFERENCES

Soerens	5,025,046	Jun. 18, 1991
Knight et al. (Knight)	5,234,547	Aug. 10, 1993
Oriaran et al. (Oriaran)	5,695,607	Dec. 9, 1997
		(filed Apr. 1, 1994)

THE REJECTIONS

The claims stand rejected under 35 U.S.C. § 103 as follows: claims 1-7 over Knight in view of Oriaran, and claim 8 over Soerens in view of Knight and Oriaran.

OPINION

The aforementioned rejections are affirmed as to claims 1-5 and 8, and reversed as to claims 6 and 7.

The appellants state that the claims stand or fall in two groups: 1) claims 1-5 and 8, and 2) claims 6 and 7 (brief, page 2). Consequently, although an additional reference is

applied to claim 8, we limit our discussion of the affirmed rejection, i.e., the rejection of claims 1-5 and 8, to one claim in that group, i.e., claim 1. See *In re Ochiai*, 71 F.3d 1565, 1566 n.2, 37 USPQ2d 1127, 1129 n.2 (Fed. Cir. 1995); 37 CFR § 1.192(c)(7) (1997).

Rejection of claim 1

There is no dispute as to whether the applied prior art would have fairly suggested, to one of ordinary skill in the art, all of the limitations of claim 1 except applying about 0.05 wt% or greater of one or more softening agents to the surface of a Yankee dryer.

Knight discloses a method for making creped sanitary products including bathroom and facial tissues, comprising applying a creping aid, i.e., an adhesive, and preferably a release agent, to a Yankee cylinder (col. 1, lines 4-10, 30-33 and 54-58). Knight teaches that when his synthetic anionic polymers are used as the creping aid, "the concentration of release agent employed can be significantly reduced and even eliminated compared to the levels currently used with conventional creping aids" (col. 1, lines 45-48) and "the resulting paper sheet is of superior bulk and softness even though significantly lower amounts of the polymer and release

agent (if at all) are employed as compared with the amounts conventionally used with convention[al] creping aids" (col. 1, lines 58-63). Knight also teaches (col. 3, lines 15-24):

The usual release agents can be employed with the anionic polymers. These include imidazolines as well as oils such as mineral oil defoamers and other deroaming [sic] agents including quaternary surfactants which have a softening effect on the paper web. It will be appreciated that, for greater control, the polymer and release agent will normally be applied separately.

The amounts used will, of course, depend very much on the nature of the paper and the degree of softness to be obtained.

The appellants' softening agents include imidazonlines (specification, page 2, line 17).

The appellants argue that there is a difference between optimizing the amount of Knight's imidazonlines as a release agent and optimizing the amount of the imidazolines for transfer to and further softening of a web (brief, page 3). Consequently, the appellants argue, it would not have been obvious to one of ordinary skill in the art to apply Knight's imidazolines to the web in an amount within the range recited in the appellants' claim 1. See *id.* The appellants argue that because of the sensitivity of creping adhesives to release agents, the amount of release agent is maintained at a very low level, see *id.*, but the appellants do not state what they consider to be the conventional

range of the amounts of release agent applied with creping aids to Yankee drums. The appellants argue that the amount of release agent in their example 1, which is the control, is only about 0.03 wt% based upon fiber. See *id.*

Assuming that an amount of release agent of about 0.03 wt% based upon fiber is a typical amount, Knight's teachings that the release agent has a softening effect on the web and that the amount of release agent depends upon the degree of softness to be obtained (col. 3, lines 15-24) would have fairly suggested, to one of ordinary skill in the art, use of an amount of release agent which is somewhat greater than about 0.03 wt% based upon fiber, such as about 0.05 wt% based upon fiber (which includes amounts below 0.05 wt%), to obtain increased softness.

The appellants argue that prior art softness gains have been attributed to improved creping rather than to transfer of release agent to the tissue surface (brief, page 3). This argument is not persuasive because Knight's teaching that the release agents have a softening effect on the web (col. 3, lines 15-19) indicates that the release agents are transferred to the tissue surface to soften it.

The appellants argue that their improved softness is unexpected (brief, page 3). Knight's teaching, however, that the release agents have a softening effect on the web (col. 3, lines 15-19) indicates that the improved softness is an expected result rather than an unexpected result. "Expected beneficial results are evidence of obviousness of a claimed invention, just as unexpected beneficial results are evidence of unobviousness." *In re Skoll*, 523 F.2d 1392, 1397, 187 USPQ 481, 484 (CCPA 1975); *In re Skoner*, 517 F.2d 947, 950, 186 USPQ 80, 82 (CCPA 1975); *In re Gershon*, 372 F.2d 535, 537, 152 USPQ 602, 604 (CCPA 1967).

For the above reasons we conclude that the method claimed in the appellants' claim 1 would have been obvious to one of ordinary skill in the art within the meaning of 35 U.S.C. § 103.

Rejection of claims 6 and 7

Claims 6 and 7, which both depend directly from claim 1, recite that the softening agent is, respectively, a phospholipid and a silicone quaternary.

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The examiner acknowledges that Knight does not disclose the appellants' phospholipid or silicon quaternary (answer, page 4), and argues (answer, page 7):

[T]he use of other softening agents in view of [the] Knight et al. teaching would have been obvious to one of ordinary skill in the art, since the softening agents such as the quaternary surfactants taught by Knight et al. are recognized in the art as mutually exchangeable with the softener agents claimed by the applicants, i.e., Phospholipids and silicon quaternary. The mutually [sic] exchangeability is recognized by applicants in page 2, line 14 through page 3, line 6.

The examiner, however, has not established that the exchangeability of the softening agents indicated by the portion of the appellants' specification relied upon by the examiner, which pertains to the appellants' invention, was known in the art. Moreover, the examiner has not established that this exchangeability of softening agents indicates an exchangeability of release agents having a softening property, which is what Knight uses in his method.

We therefore conclude that the examiner has not carried the burden of establishing a *prima facie* case of obviousness of the methods recited in the appellants' claims 6 and 7.

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DECISION

The rejection under 35 U.S.C. § 103 of claims 1-7 over Knight in view of Oriaran is affirmed as to claims 1-5 and reversed as to claims 6 and 7, and the rejection under 35 U.S.C. § 103 of claim 8 over Soerens in view of Knight and Oriaran is affirmed.

AFFIRMED-IN-PART

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EDWARD C. KIMLIN)	
Administrative Patent Judge)	
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)	BOARD OF PATENT
CHUNG K. PAK)	
Administrative Patent Judge)	APPEALS AND
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TERRY J. OWENS)	
Administrative Patent Judge)	

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